Achilles Tendinopathy

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Let’s Review!
Achilles tendon

- Origin and insertion
- Thickest and strongest
  - longest tendon in human body
- Action
- Blood supply
Achilles tendinopathy

- Clinical condition – tissue degeneration
- Signs and symptoms
  - pain and stiffness
- Condition of all generation
- Examination
- Common in physical therapy
Patient Population

- Common injury
- Effects both athletes and non-athletes
**Study #1**

- 698 competitive and recreationally active patients
  - 66% suffered from Achilles tendinopathy
Study #2

- July 10, 2013

- The Institute for Health Metrics and Evaluation at the University of Washington

- Reported more people are
  - Running
  - Biking
  - Other forms of exercise
Early-Stage Treatments

- NSAIDS
- Ice/Ice Massage
- Rest
- Stretching
- Exercise
- Taping
- Friction Massage
- Heel Lifts/Orthotics
Therapeutic Exercise

- Stretching
- ROM
- Strengthening
- Concentric muscle contractions are beneficial, but...

Eccentric, Eccentric, Eccentric provide best results
Common Exercises

• Stretching
  • Gastrocnemius Stretch
    • 30-60 second hold
  • Soleus Stretch

• Strengthening
  • Seated Heel Raises
  • Standing Heel Raises
  • Heel Drops
Progressions

- Increasing weight on affected side
- SLS - Performing exercises only on affected leg
- Placing patient’s toes on edge of step and following same progressions
Eccentric Exercise Study

• 12 week program (Alfredson, 2007)

  • Eccentric and Concentric exercise groups

  • Eccentric: 82% satisfied and back to previous activity level

  • Concentric: only 36% satisfied and back to previous activity level

• Eccentric contractions
  • Generate more tension = increased muscle strengthening
  • Increased length of muscle-tendon unit = less strain during ankle joint movements
Exercises
**Alternative Treatments**

- **Topical glyceryl trinitrate (Skin patch)**
  - Decrease inflammation
- **Extracorporeal shock wave therapy (ESWT)**
  - Increase blood flow
- **Corticosteroid injection**
  - Decrease pain
- **Electrophysical agents (Ultrasound)**
  - Increase protein synthesis
- **Night splints**
- **Surgery** – recommended as last option
VISA-A

- Self-report questionnaire
- 8 questions - 3 domains
  - Pain - questions 1-3
  - Function - questions 4-6
  - Activity - questions 7 and 8A, B, or C

1-7 scored 0-10
8 scored 0-30

Asymptomatic = 100/100
Symptomatic > 100/100
Eccentric Exercise Study (cont.)

- 12-week program (Alfredson, 2007)
- **No** concentric loading
- Complete exercises *despite pain*
- If no pain – increase eccentric load

- Eccentric program
  - 90% success rate in those who alternative treatments failed
Corticosteroid Injections (CSI)

- Short-term pain relief
- Improved walking pain
- Reduced tendon diameter
- Best if used in correlation with exercise
Night Splints

- Reduces strain on tendon
- Typically 0-5+ degrees DF

- Greater decrease in pain when combined with 12-week eccentric exercise program

- Used alone or with TE
  - Helped decrease pain for 12 months
  (Alfredson, 2007)
Works Cited


Thank you!

A pain scale ranging from 0 to 10 is shown, with an arrow pointing to a 4.